

conditions of group formation and salience of group membership. The approach is sometimes referred to as depersonalization theory. One component of this approach is an assimilation-contrast model of how group membership affects perceptive/evaluative processes with respect to in-group members and out-group individuals. Smith and Fritz apply depersonalization theory to leadership, and develop what they call a person-niche model of leadership. Several hypotheses are derived concerning leader selection, performance, and evaluation. The chapter is a fine attempt at theorizing and provides an interesting new approach to leadership.

CONCLUSIONS

Collectively, this set of chapters provides broad coverage of several central conceptual areas in the study of group processes. The sense of ferment and new ideas is readily apparent. It has been a privilege to work with the authors, and I have learned much. Clearly, not all relevant topics are covered. However, this set of chapters, in conjunction with Volume 9, covers most of the topical areas that are currently generating considerable research activity.

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Majority and Minority Influence

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The study of interpersonal influence in small groups is one of the most enduring areas of social psychological inquiry. The dominant methodology for investigating such influence uses a laboratory group in which only two distinct positions are represented and a smaller number of individuals holds one position than the other. Researchers have assumed that such bimodal and asymmetrical distributions of opinion are unstable. Even when there is no explicit demand for group consensus, it has been expected that individuals will change their positions in order to produce a more homogeneous distribution of opinion in the group.

Increased opinion homogeneity can be produced in several different ways. Minority members might shift toward majority members, majority members might shift toward minority members, both majority and

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minority members might shift toward one another, or group composition might change through the departure of some members (Festinger, 1950; Levine, 1980; Moscovici, 1976). During the 1950s and 1960s, work on interpersonal influence in small groups focused almost exclusively on majority-produced influence, usually called *conformity*. The typical conformity paradigm involves exposing a lone subject (minority) to the unanimous disagreement of several peers (majority). Stimulated by the investigations of Asch (1951, 1955, 1956), researchers conducted scores of experiments seeking to clarify the conditions under which individuals who hold a minority position in a group adopt the position held by the majority. Since the early 1970s, increasing attention has been paid to minority-produced influence, usually called *innovation*. The typical innovation paradigm involves exposing several subjects (majority) to the disagreement of one or two peers (minority). Stimulated by the investigations of Moscovici and his colleagues (Moscovici & Faucheu, 1972), many researchers sought to clarify the conditions under which individuals who hold a majority position in a group adopt the position held by the minority. Currently, research attention is shifting from an exclusive focus on either conformity or innovation toward identification of similarities and differences in the antecedents and consequences of these two types of influence.

The goal of the present chapter is to review recent work on majority and minority influence in small groups. We devote attention primarily to empirical and theoretical articles published since 1970. Detailed summaries of older work are widely available (e.g., Allen, 1965; Hollander & Willis, 1967; Jones & Gerard, 1967; Kiesler & Kiesler, 1969; Moscovici & Faucheu, 1972). Our discussion is selective rather than exhaustive and is based primarily on laboratory studies of ad hoc groups. It is divided into two major sections. The first, dealing with work on majority influence, stresses the minority's social and cognitive dependence on the majority. The second, dealing with work on both majority and minority influence, emphasizes conflict negotiation between the majority and minority.

MAJORITY INFLUENCE: THE DEPENDENCE PERSPECTIVE

The dependence perspective on social influence in groups is exemplified by the research of Asch (1951, 1955, 1956), Festinger (1950), Deutsch and Gerard (1955), and many later investigators. This work seeks to identify the major situational and individual variables that

affect the propensity of minorities to conform to majorities. In this section, we first review some important issues concerning the definition and measurement of conformity. In so doing, we refer to a number of important distinctions made prior to 1970 that still deserve consideration today. Then we discuss recent research on majority influence conducted within the dependence framework.

Definition and Measurement of Conformity

Conformity can be defined as "behavior *intended* to fulfill normative group expectancies as presently *perceived* by the individual" (Hollander & Willis, 1967, p. 64). Although seemingly straightforward, this definition masks complexities involving movement and congruence conformity, public and private conformity, and motivational determinants of conformity.

Movement Conformity and Congruence Conformity

Many authors (e.g., Allen, 1965; Kiesler, 1969) have advocated a movement (i.e., change) definition of conformity. This definition is suggested because a strong inference of conformity can be made when a person who is exposed to perceived majority pressure *changes* position toward the majority position. A major reason for adopting the movement criterion in defining conformity is to differentiate majority influence from behavioral uniformity, which occurs when an individual independently arrives at the majority position without any knowledge of what other group members think or any desire to hold their position.

Although useful in distinguishing conformity from behavioral uniformity, the adoption of movement as a *sine qua non* of conformity can sometimes be problematic. Under certain circumstances, the congruence (i.e., similarity) between the individual's position and the majority's position may better reflect conformity (Hollander & Willis, 1967). This would be true, for example, when a person independently agrees with the majority position (uniformity), subsequently is tempted to deviate from this viewpoint, but maintains his or her position because of group pressure (Kiesler & Kiesler, 1969). In such a case, conformity is manifested by *lack* of change. Sorrels and Kelley (1984) have provided a related perspective on the relationship between response inhibition and conformity, distinguishing between "conformity by commission" and "conformity by omission." The former occurs when people perform behaviors because of group pressure that they would not otherwise have

performed. The latter occurs when people fail to perform behaviors because of group pressure that they would have performed in the absence of such pressure. Noting that previous work has emphasized conformity by commission, Sorrels and Kelley demonstrated conformity by omission in an autokinetic situation. Subjects who were led to believe that two other participants perceived no autokinetic movement reported seeing less movement than did subjects responding alone.

An additional problem with the movement criterion concerns the temporal relationship between the individual's exposure to majority pressure and his or her response to this pressure. So far, we have implicitly assumed that any movement conformity that is elicited by majority pressure occurs immediately after the pressure is exerted. However, more complex temporal patterns are possible. For example, an individual might expect to receive majority pressure on some issue in the future. The individual might then exhibit *anticipatory conformity* by moving toward the presumed majority position before the actual receipt of pressure (see Cialdini & Petty, 1981; Saltzstein & Sandberg, 1979). Or, an individual might perceive current majority pressure, but be unable or unwilling to conform to this pressure immediately. The individual might then exhibit *delayed conformity* by moving toward the majority position at some time after the receipt of pressure. In both cases, movement toward the majority position occurs, but difficulties arise in detecting the covariation between the individual's exposure to majority pressure and the response to this pressure.

Public Conformity and Private Conformity

In discussing movement and congruence conformity, we restricted our attention to overt responses to majority pressure. A number of investigators have pointed out, however, that majority influence can involve covert responses as well. Two general categories of conformity have therefore been distinguished: public compliance and private acceptance. If conformity is defined as movement, then public compliance refers to an individual's overt behavioral change toward the majority's position, whereas private acceptance refers to an individual's covert attitudinal change toward the majority's position. If nonconformity is defined as lack of movement (independence), then four combinations of public compliance/noncompliance and private acceptance/nonacceptance are possible (Allen, 1965): compliance and acceptance, compliance and nonacceptance, noncompliance and acceptance, and noncompliance and nonacceptance.

Two important questions are raised by the distinction between public compliance and private acceptance. One question, dealt with in the remainder of this section, concerns the measurement of these two forms of influence. The second question, which will be dealt with in a later section, concerns the motivational factors that underlie the occurrence of these two forms of influence.

Although the conceptual distinction between compliance and acceptance is easy to understand, methodological problems arise in demonstrating acceptance empirically (Allen, 1965). One obvious technique is to measure a person's publicly stated opinion in the presence of majority members (Time 1) and then measure the same opinion later when the person is alone (Time 2). If the person agrees with the majority's position at Time 1 but not at Time 2, then we might conclude that public but not private agreement has occurred. However, if the person agrees with the majority at both Time 1 and Time 2, then we might conclude that private acceptance as well as public compliance has occurred. Unfortunately, things are not so simple. For example, the fact that a person privately agrees with the majority at Time 2 does not prove that he or she privately agreed at Time 1. Other factors (e.g., dissonance reduction) might have subsequently produced congruence between the person's public and private responses (see Chaiken & Stangor, 1987, and Higgins & McCann, 1984, for discussions of mechanisms by which public responses can affect private responses). Moreover, the absence of private agreement at Time 2 does not lead to clear conclusions. It is possible that private agreement did occur at Time 1, but has since dissipated. Other techniques for measuring private acceptance are also fraught with problems. For example, asking subjects to recall their private positions during a prior majority pressure situation may elicit intentional distortions or memory errors. Moreover, assessing transfer of majority influence from one topic (e.g., aid to Honduras) to a "related" topic (e.g., aid to Costa Rica) demands detailed knowledge of subjects' perceptions of the relationships between the topics.

An ingenious technique that may prove useful for measuring private acceptance (with or without public compliance) has been suggested by Allen and Wilder (1980). In a study designed to assess whether group pressure can change the meaning of opinion statements, these investigators had subjects read several statements (e.g., "I would never go out of my way to help another person if it meant giving up some personal pleasure.") and then give their interpretations of key phrases in each statement (e.g., "go out of my way"). In one condition, subjects learned

that a unanimous group of peers disagreed with their opinions on the statements. In a second (control) condition, no group responses were provided. Allen and Wilder found that subjects interpreted the key phrases differently in the unanimous and control conditions. For example, the phrase "go out of my way" in the above example was interpreted to mean "risk my life" in the unanimous condition and "be inconvenienced" in the control condition. These findings suggest that meaning change, or cognitive restructuring, of stimulus issues may have utility as an index of private acceptance.

A Descriptive Model of Responses to Majority Pressure

Several theorists have offered descriptive models of responses to majority pressure that take into account one or more of the issues discussed above (see review by Nail, 1986). For example, Allen's (1965) fourfold model of public compliance and private acceptance deals explicitly with congruence-noncongruence and compliance-acceptance and deals implicitly with movement-nonmovement. However, Allen's model does not handle the situation of initial agreement between the minority and majority. In another well-known model (Willis, 1963, 1965), four responses to majority pressure are differentiated: conformity (congruence and movement), anticonformity (noncongruence and movement), uniformity (congruence and nonmovement), and independence (noncongruence and nonmovement). This model deals explicitly with congruence-noncongruence and movement-nonmovement and handles the situation of initial agreement between the minority and majority. However, it does not consider compliance-acceptance.

Nail (1986) has offered a "synthetic model" of influence that integrates Allen's (1965) and Willis's (1963, 1965) models. Nail's model uses three factors, each with two levels, to generate eight possible behaviors. The factors are (1) initial agreement-disagreement, (2) final public congruence-noncongruence, and (3) final private agreement-disagreement. The eight possible behaviors are (1) *conversion* (initial disagreement, final public congruence, final private agreement), (2) *compliance* (initial disagreement, final public congruence, final private disagreement), (3) *anticompliance* (initial disagreement, final public noncongruence, final private agreement), (4) *independence* (initial disagreement, final public noncongruence, final private disagreement), (5) *congruence* (initial agreement, final public congruence, final private agreement), (6) *compliance-2* (initial agreement, final public congruence, final private disagreement), (7) *anticompliance-2* (initial agreement,

final public noncongruence, final private agreement), and (8) *anticonversion* (initial agreement, final public noncongruence, final private disagreement).

Nail's model provides a useful framework for describing alternative responses to majority (and, perhaps, minority) pressure. Without some explanatory mechanism to predict when particular behaviors will occur, however, this model is unlikely to generate much empirical work. Neither Allen's (1965) nor Willis's (1963, 1965) model has been notably successful in stimulating research.

Motivational Determinants of Conformity

So far, our discussion of conformity has been at the descriptive level. In this section, we consider explanatory analyses of the motivational and cognitive underpinnings of majority influence. As mentioned above, much of the interest in these issues has been stimulated by a desire to understand better the relationship between public compliance and private acceptance.

Normative and informational influence. The dominant theoretical explanation for the occurrence of conformity has been Deutsch and Gerard's (1955) analysis of normative and informational influence. These investigators defined normative influence as "influence to conform to the positive expectations of another" (p. 629) and informational influence as "influence to accept information obtained from another as evidence about reality" (p. 629). Although Deutsch and Gerard are not alone in proposing a dichotomous model of social and cognitive bases of majority influence (e.g., Kelley, 1952; Jones & Gerard, 1967; Thibaut & Strickland, 1956), their formulation is the best known of these models. Moreover, the normative-informational distinction continues to stimulate new theoretical and empirical work (e.g., Burnstein, 1982; Campbell, Tesser, & Fairey, 1986; Insko, Drenan, Solomon, Smith, & Wade, 1983; Kaplan & Miller, 1983; Stasser, Kerr, & Davis, 1980; Wolf, 1979).

Normative influence is based on the desire to maximize one's social outcomes in the group, coupled with the assumption that majority members will respond more favorably to conformity than to deviance. Evidence indicates that, compared to people who conform to majority consensus, those who deviate anticipate receiving more negative evaluation from other group members (e.g., Gerard & Rotter, 1961). Moreover, there appears to be a realistic basis for this fear of punishment for nonconformity. Many studies indicate that majority members do indeed dislike and reject attitudinal deviates (see Levine,

1980, for a detailed review). Research suggests that normative influence is likely under conditions of public responding (e.g., Deutsch & Gerard, 1955), anticipation of future interaction with other group members (e.g., Lewis, Langan, & Hollander, 1972), and reward interdependence among group members (e.g., Deutsch & Gerard, 1955; Sakurai, 1975).

Informational influence is based on the desire to have accurate beliefs about reality, coupled with the assumption that the majority is more correct or knowledgeable than oneself. A good deal of evidence indicates that people seek to evaluate their beliefs (and abilities, emotions, and outcomes) through social comparison with others (e.g., Festinger, 1950, 1954; Levine, 1983; Levine & Moreland, 1986; Suls & Miller, 1977). According to Allen and Wilder (1977), individuals who desire to evaluate their beliefs are motivated to agree with others, which in turn can produce conformity.¹ In general, the less confident a person is in the validity of a position, the more susceptible that person is to informational influence (Allen, 1965). Confidence, in turn, can be affected by such factors as the ambiguity and difficulty of the stimulus under consideration (Tajfel, 1969).

Deutsch and Gerard (1955) did not discuss the relationship between normative/informational influence and public compliance/private acceptance. Subsequent authors, however, have suggested that normative influence produces compliance but not acceptance, whereas informational influence produces both compliance and acceptance (e.g., Allen, 1965; Kaplan & Miller, 1983; Kiesler, 1969; Nail, 1986). Although this suggestion seems intuitively plausible given how the two forms of influence are defined, it is better viewed as an hypothesis than as a fact, because the motives underlying normative and informational influence (i.e., the desire to maximize one's social outcomes and the desire to gain accurate beliefs about reality, respectively) are rarely measured directly in conformity studies. Instead, investigators either simply assume that their intended operationalizations of normative and informational influence were effective or, worse, make post-hoc judgments that one or the other type of influence was operating on the basis of the results of their study.

Social power. In contrast to Deutsch and Gerard's neglect of the compliance-acceptance issue, other theorists have developed models that deal explicitly with motivational determinants of public and private influence. Although primarily designed to explain influence in dyadic situations, these models are also applicable to conformity and nonconformity in group situations. The social power analysis developed by

Raven and his colleagues (e.g., Collins & Raven, 1969; Raven & Kruglanski, 1970), which subsumes Kelman's (1958, 1961) formulation, is a good example.

Raven posits six types of unilateral social influence. *Reward* influence (based on the desire to obtain majority rewards) produces public conformity and private independence. *Coercive* influence (based on the desire to avoid majority punishments) produces public conformity and private anticonformity. The conformity elicited by reward and coercive influence only continues as long as the individual believes that the majority maintains surveillance of behavior. *Expert* influence (based on the desire to be correct and the perception that the majority has superior knowledge), *referent* influence (based on the desire to identify with an attractive majority), and *legitimate* influence (based on the belief that the majority has a moral right to prescribe one's behavior) all produce both public conformity and private conformity. In order for this conformity to remain stable over time, the individual must continue to view the majority as competent, attractive, or legitimate, respectively. *Informational* influence (based on the desire to be correct and the perception that the majority's position is congruent with one's existing belief and value system) also produces both public conformity and private conformity. However, this conformity persists over time in the absence of any particular perception of the majority or knowledge of majority surveillance.

Although some of Raven's ideas about social influence have not been explicitly tested in group pressure situations, his analysis provides a useful heuristic device for conceptualizing the motivational determinants of public and private conformity. In addition to distinguishing six types of unilateral social influence, Raven considered other issues that are potentially important in group situations, including (a) the impact of influence type on attraction toward and interaction with the influence source, (b) "compounded" influence based on two or more types of unilateral influence, (c) reciprocal influence in which both parties to the interaction (e.g., majority and minority) attempt to exert pressure on one another, and (d) "secondary," or indirect, influence mediated by such processes as cognitive dissonance.

Recent explanations of conformity and nonconformity. Several authors have recently proposed explanations of conformity that emphasize the attributions that individuals make in group pressure situations. Ross, Bierbrauer, and Hoffman (1976) argued that how a person holding a minority position interprets the majority's behavior

and expects the majority to interpret his or her behavior will determine the person's level of conformity. They obtained evidence indicating that subjects exposed to majority pressure conformed less and were more confident in their answers when they had an adequate reason for the disagreement and they felt that majority members also had such a reason than when they did not. Arguments for the importance of self- and/or other-attributions in explaining majority influence have also been made by Allen and Wilder (1977) in their discussion of social comparison and conformity, by Duval (1976) in his objective self-awareness interpretation of conformity, and by Santee and Jackson (1982) in their work applying situated identity theory to conformity.

Recent explanations of nonconformity are varied, reflecting the diverse forms that nonconformity can take. Moscovici (1976), whose work will be discussed in more detail later, suggested that a person who is convinced that his or her position is valid will want to gain visibility and social recognition. To do so, the person will confidently assert his or her position (i.e., remain independent) and even try to provoke conflict in the group (see Hollander, 1975; Willis, 1965). Of course, rather than standing firm, a nonconformer might move away from the group's position. Brehm (1966; Brehm & Mann, 1975) argued that a person who believes that behavioral freedom is threatened will feel "reactance," which in turn will cause that person to try to restore the freedom. One way to do this is to anticonform to the majority that is responsible for the reduced freedom. Some attention has also been devoted to why people use partial conformity, or compromise, as a nonconformity strategy. Jones and Wortman (1973), and Schlenker (1980) suggested that an individual who wants to be accepted by a majority may fear that total agreement will be perceived as sycophancy. In order to avoid this negative attribution, the individual may only partially conform. Consistent with this reasoning, evidence indicates that dissenters are viewed more positively than conformers on certain dimensions (e.g., Morris & Miller, 1975b). Finally, it has been suggested that certain individual difference factors, such as private self-consciousness, self-esteem, and depression, may play an important role in stimulating nonconformity (e.g., Santee & Masiach, 1982; Wallace, Becker, Coppel, & Cox, 1983).

Recent Research on Conformity

As the previous section indicates, theorists have suggested several motivational bases for susceptibility and resistance to majority pressure.

The empirical research on majority influence, however, has been more concerned with when conformity occurs than with why it occurs. Investigators have thus devoted their energies to identifying specific variables that increase and decrease the probability of conformity in experimental situations, rather than to testing motivational theories. In this section, we discuss recent research on two factors that have long been viewed as important determinants of susceptibility to majority influence: the sex of minority members, and the relative number of minority members. Our discussion focuses on the determinants of public compliance rather than private acceptance.

Sex of Minority Members

Until the early 1980s, there was a high degree of consensus regarding the relative susceptibility of males and females to majority pressure. A number of reviewers, after examining the empirical work on sex differences in conformity, concluded that females conform more than do males (e.g., Cooper, 1979; Hare, 1976; Nord, 1969; Shaw, 1981). Disagreements have arisen recently, however, regarding the magnitude of this sex difference and the reasons for its occurrence.

It has been suggested that the sex of the researcher is an important determinant of sex differences in conformity. In an extensive review, Eagly and Carli (1981) found that female subjects conform more than male subjects primarily in studies authored by males. In studies authored by females, the two sexes typically conform about equally. Eagly and Carli mentioned several possible reasons why authors' sex may affect conformity. They suggested, for example, that researchers may design experimental settings in which members of their own sex feel particularly self-confident and hence are less susceptible to group pressure than are members of the opposite sex. Although a plausible explanation for greater conformity by females than males in studies authored by males, this interpretation does not account for the absence of greater conformity by males than females in studies authored by females. A second interpretation offered by Eagly and Carli focused on the criteria that researchers use in deciding whether to report null findings. Perhaps female researchers are more likely to report the absence of sex differences in conformity than are male researchers, because females are pleased to disconfirm a traditional feminine stereotype. If so, this tendency could account for the overall pattern of results in Eagly and Carli's review.

Another possible explanation of sex differences in conformity involves the stimulus that subjects are asked to judge (Eagly, 1978; Eagly & Carli, 1981). Some studies that found greater conformity by females used stimuli that were relatively unfamiliar to females. A good deal of evidence indicates that people tend to conform more on difficult or ambiguous stimuli, where their self-perceived competence is low (e.g., Allen, 1965; Endler, Wiesenthal, Coward, Edwards, & Geller, 1975). Therefore, female subjects' higher conformity in certain studies may have been due to their lack of familiarity with the "masculine" stimuli they were asked to judge. Although this informational influence hypothesis is plausible and is supported by the results of several experiments (e.g., Goldberg, 1974, 1975; Karabenick, 1983; Sistrunk & McDavid, 1971), other data reviewed by Eagly and Carli (1981) cast doubt on its usefulness as a general explanation for sex differences in conformity.

Finally, several reviewers (Cooper, 1979; Eagly, 1978; Eagly & Carli, 1981) noted that when sex differences in conformity do occur, they generally involve face-to-face situations in which group members can monitor one another's responses. Eagly (1978) suggested that females may be more concerned than males with maintaining group harmony and cohesiveness. To test this idea, Eagly, Wood, and Fishbaugh (1981) assessed the conformity of male and female subjects in situations involving either surveillance or no surveillance by a group. Results indicated that women did conform more than men in the group surveillance condition. However, women showed equal conformity in the surveillance and no surveillance conditions, whereas men conformed less in the former than in the latter condition. Eagly et al. interpreted their findings as indicating that, rather than females exhibiting heightened conformity under surveillance in order to maintain group harmony, males exhibit reduced conformity in this situation, perhaps to fulfill gender role expectations of independence.

Relative Number of Minority Members

In a group containing n members in which only two distinct positions are represented and a smaller number of individuals holds one position than the other, minority size can vary from a low of 1 to a high of $(n/2) - 1$. A substantial amount of research has investigated the impact of relative minority size on conformity.

Minorities of one member. Looking first at research on how one-person minorities react to disagreement from majorities of different

sizes, we find a rather confusing picture. Asch (1951) reported that conformity increased until the majority reached three persons, at which point influence leveled off. Some later studies confirmed the existence of a ceiling effect in conformity (e.g., Rosenberg, 1961; Stang, 1976), but other experiments either indicated that conformity increased as majority size increased (e.g., Carlston, 1977; Gerard, Wilhelmy, & Conolley, 1968) or revealed no significant relationship between size and conformity (e.g., Goldberg, 1954; Kidd, 1958). In order to resolve some of the ambiguities in earlier studies, recent research has sought to determine a precise mathematical relationship between majority size and conformity and to clarify the psychological basis of this relationship.

Latane and Wolf (1981; Wolf & Latane, 1985) offered an analysis of majority size and conformity based on Latane's (1981; Latane & Nida, 1980) social impact theory. These investigators argued that individuals are affected by the mere presence of other people and that the amount of majority influence in a group situation is a multiplicative function of the strength (e.g., status), immediacy (e.g., physical closeness), and number of people holding the majority position. In regard to the impact of majority size, Latane and Wolf (1981) reported a study by Latane and Davis in which college students were asked to give their opinions on several related questions. Subjects were exposed to the unanimous responses of 1, 2, 3, 6, or 12 persons on each question. Latane and Wolf found that conformity was related to majority size by a power function. That is, conformity increased as group size increased, but each succeeding majority member produced a smaller increment in conformity than the preceding member. In a reanalysis of results from the Gerard et al. (1968) experiment, Latane and Wolf found that a power function also described the relationship between group size and conformity in that study. Similar data have been obtained by Wolf and Latane (1983) and Wolf (in press).

Tanford and Penrod (1984) presented a social influence model of the relationship between majority size and conformity that differs from Latane and Wolf's social impact model in several ways, most notably by predicting that the second and third influence sources have more impact than the first source and that total influence eventually reaches some asymptote. Tanford and Penrod argued that the relationship between majority size and conformity is not a power function, but rather an S-shaped growth (*Gompertz*) curve. On the basis of a meta-analysis of a large number of studies, Tanford and Penrod concluded that their social influence model does a better job of accounting for data on majority size

and conformity than does the social impact model.

Mullen (1983) offered yet another alternative to the social impact model. He argued that conformity varies positively as a function of the *other-total ratio*, $(O / O + S)$, where S = number of people in the individual's own subgroup and O = number of people in the other subgroup. On the basis of a meta-analysis of 12 studies, Mullen concluded that the other-total ratio accurately predicts conformity. He suggested that while his model is similar to the social impact model in some ways (e.g., in predicting a negatively accelerating relationship between the number of influence sources and their impact), it is superior in other ways. The most important of these advantages is the provision of a theoretical explanation for the impact of majority size on conformity. (It is important to note that such an explanation is missing from Tanford and Penrod's—as well as Latane and Wolf's—model.) Mullen's explanation for the majority size effect assumes that individuals become more self-attentive as the relative size of their subgroup decreases, that increased self-attention leads to greater efforts to match behavior to salient standards (Carver & Scheier, 1981), and that the salient standard in a group pressure situation is the majority position. As Wolf (in press) argues, however, this last assumption is open to question because Mullen's analysis suggests that the minority's position, rather than the majority's position, is the focus of attention for all group members. This in turn might cause the minority's viewpoint to become the salient standard.

As mentioned earlier, several authors have suggested that an individual's conformity to majority pressure is influenced by his or her interpretation of majority members' responses (e.g., Ross et al., 1976). If so, it seems plausible that the impact of majority size on conformity may also be affected by these perceptions. Consistent with this reasoning, Wilder (1977) argued that perhaps conformity did not increase with majority size in some prior studies because majority members were viewed as nonindependent sources of information. That is, subjects may have viewed the majority as a single entity rather than as an aggregate of independent individuals, which in turn caused subjects to suspect that majority members influenced one another's judgments (Wilder, 1978b). This line of reasoning led Wilder to hypothesize that conformity will not vary with the simple number of majority members adhering to a position. Instead, conformity will increase as a function of the number of distinct (i.e., independent) social entities espousing the majority position, regardless of whether the entities are groups or individuals.

Wilder (1977, 1978a) confirmed this hypothesis in several studies. Taken as a whole, Wilder's findings suggest that if a subject is opposed by an unanimous majority, conformity will vary directly with majority size only if majority members are viewed as having arrived independently at their common position. This conclusion is quite consistent with an informational influence interpretation of conformity.

Minorities of two or more members. In turning to the question of how minorities larger than one person react to disagreement from majorities, we again see the important generative role of Asch's early work. To determine whether one-person and two-person minorities respond differently to majority pressure, Asch (1951) had a confederate dissent from erroneous majority consensus and agree with the subject on visual perception stimuli. The presence of this social supporter reduced conformity dramatically, compared to a condition in which the subject was confronted by a unanimous majority. Asch (1955) next sought to determine if the supporter's effectiveness was due to (a) merely breaking group unanimity, or (b) providing an answer with which the subject privately agreed. To test the relative importance of these two factors, Asch had a confederate dissent from majority consensus by answering even more incorrectly than the erroneous majority. He found that this extreme dissenter reduced conformity almost as much as the social supporter, suggesting that the supporter's effectiveness was based on simply breaking group unanimity, rather than agreeing with the subject's private judgment.

More recent research suggests that Asch's conclusion, although correct for simple perceptual judgments, is not valid when subjects are asked to respond to other kinds of stimuli. Allen and Levine (1968, 1969) compared the effectiveness of social support and extreme dissent in reducing conformity on both visual perception and opinion items. They found, consistent with Asch, that both types of dissenters reduced conformity on visual items. However, on opinion items only the social supporter was effective. Thus, in order to reduce conformity on matters of opinion, a dissenter must agree with the subject's private judgment.

A number of additional studies have been conducted to determine the generality of the social support effect and to clarify the mechanisms underlying it. Most of this work has been carried out by Allen and his colleagues (see Allen, 1975). Regarding the generality of social support, it has been found that the presence of a partner decreases conformity for many different types of people, including male and female adults and normal and mentally retarded children. Moreover, under certain

circumstances, the resistance to majority pressure conferred by social support continues even after the partner physically leaves the situation. This outcome occurs, for example, when the same type of stimulus is judged on both occasions and the supporter never repudiates his or her dissenting position.

Two major explanations have been proposed for why social support reduces conformity. One explanation is based on the partner's ability to reduce the subject's fear of majority retaliation for deviance. Evidence indicates that a subject who deviates alone from group consensus anticipates rejection and that the presence of a partner who publicly agrees with the subject reduces this fear (Allen, 1975). This decreased fear of majority retaliation may occur because the subject believes that the majority will "divide" its hostility between the supporter and the subject. In addition, the subject may assume that if he or she has a partner, the majority will be less likely to attribute nonconformity to a personal idiosyncrasy, which in turn will reduce the majority's anger at nonconformity. It should be noted, however, that if the subject believes that the majority particularly dislikes the supporter (e.g., because of race), the subject will be reluctant to agree with the supporter (Boyanowsky & Allen, 1973). This outcome occurs because a disliked supporter may increase, rather than decrease, the amount of punishment that the majority directs to the subject.

Besides protecting the subject against majority punishment, a social supporter also provides information about the stimulus object. Research indicates, for example, that a supporter who is allegedly competent on the group task is more effective in reducing conformity than is an incompetent supporter (Allen & Levine, 1971b). In addition to the supporter's competence, the timing of agreement is important. A supporter who responds first in the sequence of group members is most effective in reducing conformity, presumably because the early supporter reinforces the subject's initial judgment and thereby prevents uncertainty from arising when subsequent group members disagree with the subject's position (Allen & Levine, 1971a; Morris & Miller, 1975a). In addition, there is evidence that a supporter who answers after all the majority members have responded also reduces conformity substantially, perhaps because late support reduces a high level of uncertainty (Morris, Miller, & Sprangenberg, 1977). Finally, Allen and Wilder (1980) discovered yet another way in which social support provides information about the stimulus object. In addition to finding that unanimous group pressure produces cognitive restructuring of stimulus

material, these investigators found that the presence of a social supporter *prevents* such restructuring.

In discussing the operation of social support, we have focused on how one-person versus two-person minorities react to disagreement from majorities. Of course, minorities can have more than two members. The issue of how larger minorities respond to majority pressure has been addressed by several theorists already mentioned. Latane and Wolf (1981; Wolf & Latane, 1985) argued that individuals holding a minority position in a group are in both a multiplicative and a divisive force field. The pressure that these individuals feel to adopt the majority position varies positively with the strength, immediacy, and number of people in the majority and varies negatively with the strength, immediacy, and number of people in the minority (i.e., pressure and majority impact/minority impact).² Tanford and Penrod (1984) also took minority size into account in their social influence model. They used transition matrices borrowed from the DICE model of jury decision making (Penrod & Hastie, 1980) to specify the likelihood that a member of a minority faction of a given size will be influenced by a majority faction of a given size at a particular point in time. And, although Mullen (1983) did not explicitly discuss the impact of minority size on conformity, his other-total ratio can deal with variations in minority as well as majority size.

The work of Davis and his colleagues on influence processes in decision-making groups provides another theoretical perspective on the relationship between majority/minority size and conformity (see Stasser, Kerr, & Davis, 1980). In most of the studies described so far, interaction among group members is severely limited, there is no explicit pressure to arrive at a joint decision, and individual opinion change is the major dependent variable. In contrast, Davis and his colleagues are interested in decisions reached by freely interacting groups seeking to reach a consensus. These investigators study the process as well as the outcomes of group discussion and explicitly recognize that reciprocal influence can occur between majorities and minorities (see Penrod & Hastie, 1980). Three complementary mathematical models of group decision making have been developed: the social decision scheme (SDS) model (Davis, 1973), the social transition scheme (STS) model (Kerr, 1981, 1982), and the social interaction sequence (SIS) model (Stasser & Davis, 1981). These powerful models clarify many aspects of social influence in groups, including opinion changes at the individual as well as the group level and the role of task type and member status in decision

making (Kirchler & Davis, 1986). In regard to the impact of majority/minority size on conformity, Davis and his colleagues have found that members of minority factions are more likely to change their positions than are members of majority factions and that the power of the majority increases as a function of its size (e.g., Davis, Stasser, Spitzer, & Holt, 1976; Kerr, 1981). Moreover, recent evidence suggests that this majority effect is based on informational rather than normative influence (Stasser, Stella, Hanna, & Colella, 1984).

MAJORITY AND MINORITY INFLUENCE: THE CONFLICT PERSPECTIVE

As described above, the dependence perspective on social influence in groups views the minority as a target but not a source of influence and explains conformity (majority influence) in terms of the minority's social and cognitive dependence on the majority. Within the last 15 years, an alternative to this approach has been developed by Moscovici. His model of social influence views the minority as a source as well as a target of influence and explains both conformity and innovation (minority influence) in terms of conflict and behavioral style (Moscovici, 1974, 1976, 1980, 1985a, 1985b; Moscovici & Faucheu, 1972; Moscovici & Mugny, 1983; Moscovici & Nemeth, 1974).

Moscovici believes that his approach supplants rather than supplements traditional thinking about social influence. He exemplifies his theoretical ideas about minority influence by taking a rather combative position and thereby provoking conflict with other theorists. For example, in introducing a summary of recent work by Ross et al. (1976), Allen and Wilder (1980), and Latane and Nida (1980), Moscovici (1985b) stated that "even after anomalies have begun to pile up alarmingly and even after a new theoretical paradigm has emerged, normal science continues to advance and prosper in the traditional direction, just as nature in the fall brings to full bloom flowers that are doomed to wither in a matter of hours once the first frost appears" (p. 382).

In this section, we first summarize Moscovici's comparison of the dependence and conflict models of social influence. Then we present research on majority and minority influence stimulated by the conflict perspective. Finally, we discuss how innovation is affected by the group context in which the majority and minority interact.

Overview of Moscovici's Position

Moscovici states that the dependence position emphasizes asymmetrical influence, in which minorities are potential targets (but not sources) of influence and majorities are potential sources (but not targets) of influence. In this framework, minority disagreement is treated as obstinate refusal to conform rather than an active challenge to the majority. In contrast, the conflict position emphasizes symmetrical influence in which both minorities and majorities can be sources and targets of influence. Minorities are likely to be influential, according to Moscovici, when they are "nomic" (i.e., strongly committed to their position) rather than "anomic" (i.e., uncommitted to their position). Related to the distinction between asymmetrical and symmetrical influence is Moscovici's contention that the dependence position emphasizes only social control, whereas the conflict position also emphasizes social change.

In regard to the psychological mechanisms that mediate influence, Moscovici states that the traditional perspective focuses on dependence relations and the need to reduce uncertainty, whereas his own perspective focuses on conflict and behavioral style. In criticizing the dependence model, Moscovici argues that neither dependence nor uncertainty is an important determinant of majority or minority influence (see Levine, 1980, for a detailed critique of the empirical and logical basis of this argument). In defending the conflict model, Moscovici argues that influence is directly related to the production and resolution of conflict. He suggests that disagreement produces both interpersonal and intrapersonal conflict and that the essence of influence is conflict negotiation. Conflict is affected by such variables as the discrepancy between the majority and minority positions, the nature of the response alternatives (categorical versus variable), individuals' commitment to their positions, and the possibility of excluding the minority. Moscovici views behavioral style, which involves the organization, timing, and intensity of responses, as the most important determinant of both majority and minority influence. Of the five behavioral styles that he originally identified (investment, fairness, autonomy, consistency, rigidity), only the last two have received systematic research attention. Consistency, defined as maintenance of a position over time and modality, is assumed to enhance influence. Rigidity, a variant of consistency in which the influence source is perceived negatively (e.g., as inflexible and dogmatic)

rather than positively (e.g., as self-confident and committed), is assumed to reduce influence.

Moscovici contrasts the dependence and conflict models in terms of the norms that underlie influence and the forms that influence can take. The dependence model only considers the objectivity norm (i.e., pressure to hold an objectively correct position). In contrast, the conflict model considers the objectivity norm, the preference norm (i.e., tolerance for a variety of different positions), and the originality norm (i.e., pressure to hold a novel position). Regarding the forms of influence, the dependence model recognizes only conformity. In contrast, the conflict model recognizes conformity (i.e., majority influence that reduces conflict), normalization (i.e., reciprocal influence that avoids conflict), and innovation (i.e., minority influence that creates conflict). According to Moscovici, conformity occurs when the majority is nomic and the minority is anomic, normalization occurs when there is no clear consensus and group members are relatively uncommitted to their positions, and innovation occurs when the minority is nomic and the majority is either nomic or anomic. Finally, Moscovici argues that majority influence generally produces overt but not covert response change, whereas minority influence generally produces covert but not overt response change.

Several criteria must be considered in evaluating a new theory. One criterion is the degree to which the new perspective stimulates empirical work on neglected problems. According to this standard, Moscovici's theory clearly deserves credit for focusing attention on the importance of minority influence and stimulating research on this issue. A second criterion is the theory's ability to account for data obtained by researchers working within other paradigms. By this standard, Moscovici's analysis is problematic. His efforts to discredit dependence interpretations of prior studies and to reinterpret these studies in his own terms are often based on selective citations and questionable inferences (see Doms, 1984; Levine, 1980). Finally, a new theory must be evaluated in terms of the precision and testability of its predictions and the degree to which these predictions are empirically confirmed. According to these standards, Moscovici's position has both strengths and weaknesses. Although his model suggests many interesting hypotheses, it is stated in very general terms and fails to specify with precision the psychological mediators of majority and minority influence. Moreover, although a number of studies have provided data consistent with

the model, other studies have yielded ambiguous or nonsupportive findings.

Research on Minority and Majority Influence

Given its relatively recent introduction, Moscovici's model has stimulated a substantial amount of research. Detailed summaries of this literature are available (Levine, 1980; Maass & Clark, 1984; Tanford & Penrod, 1984; Moscovici, 1976, 1985b), and therefore our coverage is restricted to an overview of the two most active lines of inquiry: (a) how minority consistency and rigidity affect minority influence, and (b) how the source of influence (majority versus minority) affects the outcome of influence (compliance versus conversion).

Minority Consistency

A major premise of Moscovici's model is that minority consistency is a necessary (though not a sufficient) condition for minority influence. In an early test of this idea, Moscovici and his colleagues (Moscovici & Lage, 1976; Moscovici, Lage, & Naffrechoux, 1969) exposed a four-person majority to a two-person minority that expressed either consistent or inconsistent disagreement with the majority's judgments on a simple perceptual task. As predicted, results revealed that majority members were influenced by the consistent, but not by the inconsistent, minority. Subsequent research has found that consistent minorities are influential under a variety of conditions (Maass & Clark, 1984).

In spite of this evidence, however, other data suggest that minority consistency does not operate in a simple manner. For example, using a different experimental paradigm than that favored by Moscovici and associates, Levine and his colleagues found that, on attitudinal issues, consistency is *not* a crucial determinant of minority influence (Levine & Ranelli, 1978; Levine, Saxe, & Harris, 1976; Levine, Sroka, & Snyder, 1977). Their findings indicate, for example, that a person who shifts from the majority position to a minority position is much more influential than a person who consistently espouses a minority position. Additional research demonstrates that the impact of minority consistency is importantly constrained by other variables, including: (a) the size of the minority (e.g., Moscovici & Lage, 1976; Nemeth, Wachtler, & Endicott, 1977), (b) the extremity, content, and assumed reason for the minority's position (e.g., Levine & Ranelli, 1978; Levine & Ruback, 1980; Paicheler, 1976, 1977), (c) the normative context in which

majority/minority interaction occurs (e.g., Maass, Clark, & Haberkorn, 1982; Moscovici & Lage, 1978; Paicheler, 1976, 1977), and (d) the amount of social support available to the majority (Doms, 1984; Doms & Van Avermaet, 1985).

Two important conceptual issues regarding the relationship between minority consistency and influence have also been raised. One issue involves confusion regarding the definition of "consistency," particularly as it relates to "rigidity" (Maass & Clark, 1984). The second issue concerns precisely why consistency increases influence. Attributional explanations of the relationship between consistency and influence were offered by Moscovici and Nemeth (1974) and Maass and Clark (1984). Chaiken and Stangor (1987) criticized both of these explanations for their emphasis on attributions regarding the minority's underlying dispositions (e.g., certainty). They suggested that attention should be given instead to attributions regarding the validity of the minority's message (see Eagly & Chaiken, 1984). Chaiken and Stangor also sounded a note of caution regarding the utility of any attributional model as a complete explanation of minority influence, arguing that such models are relevant primarily when majority members are motivated to maximize the validity of their opinions.

Minority Rigidity

Rigidity has been extensively studied by Mugny and his colleagues, who extended Moscovici's model by proposing a "psychosociological" theory of minority influence (Mugny, 1982, 1984b; Papastamou, 1984; Papastamou & Mugny, 1985). This theory, which embeds minority influence within large institutional contexts, emphasizes the importance of social categories and ideology. Mugny distinguished three social entities linked by three relationships. Regarding the entities, the *power* dictates norms and rules within an institution or society, the *population* submits to the power's domination and accepts (to a greater or lesser extent) the power's ideology, and the *minority* actively challenges the power. Regarding the relationships between entities, the power and the population are linked by domination, the power and the minority are linked by antagonism, and the minority and the population are linked by influence. According to this analysis, the power seeks to maintain its domination over the population while weakening or destroying the minority, and the minority implacably opposes the power while trying to influence the population to adopt its position.

Mugny argues that, in order to win the population, the minority must

be perceived as consistent and unyielding vis-à-vis the power, but as willing to negotiate with the population. He therefore suggests that behavioral style (consistency/inconsistency) defines the antagonistic relationship between the minority and the power, whereas negotiation style (flexibility/rigidity) defines the influence relationship between the minority and the population. A rigid negotiating style, which refuses to make any concessions to the population, is unsuccessful because the population will perceive the minority's consistency as dogmatism. This perception, in turn, makes it likely that the population will attribute the minority's position to some stable, idiosyncratic characteristic and will view the minority as an out-group. These negative perceptions of the minority are encouraged by the power as part of its efforts to maintain domination.

Mugny and his colleagues have conducted a number of studies to test these and related ideas about the impact of rigidity on minority influence. Most of their experiments used a paradigm in which subjects who believed that industry was only partially responsible for pollution read a statement that placed total blame on industry. According to Mugny, this statement represented a minority position in relation to power. The rigidity/flexibility of the minority was operationalized in terms of the extremity of the sanctions recommended for industrial polluters (e.g., rigid: shutdown of manufacturing; flexible: monetary fines). After reading the statements, subjects expressed their views about the causes of pollution on both direct items (that were explicitly presented in the statement) and indirect items (that were implied in the statement). These studies provided suggestive evidence that flexible minorities produce more direct influence than do rigid minorities; that the influence of rigid minorities increases if subjects are prevented from attributing the minority's position to idiosyncratic personal characteristics and if subjects view themselves as members of the same social category as the minority; and that flexible minorities produce similar levels of direct and indirect influence, whereas rigid minorities produce more indirect influence (see reviews by Mugny, 1982, 1984b; Papastamou, 1984; Papastamou & Mugny, 1985).

Mugny (1982) argued that, in evaluating an interrelated series of studies such as his own, it is inappropriate to criticize individual experiments; instead, the studies should be evaluated as a total set. Although there may be merit in this suggestion, its application in this case leads to a mixed evaluation. On the positive side, Mugny and his colleagues made a bold effort to explain minority influence in societal

contexts and offered a number of intriguing hypotheses. On the negative side, there was sometimes slippage between Mugny's conceptual and operational definitions, as when rigidity/flexibility was operationalized as extremity. In addition, the most complete review of this research (Mugny, 1982) reveals that findings often failed to replicate from study to study and complex *a posteriori* interpretations were needed to make sense of the data. This lack of clarity may stem in part from the inherent difficulties of testing molar-level theories in laboratory settings.

Majority/Minority Influence and Compliance/Conversion

Moscovici (1980, 1985a, 1985b) argued that majority influence and minority influence are qualitatively different processes. Although conflict is aroused in both cases, the manner in which it is resolved differs. Majorities induce a *comparison* process, in which minority attention is focused on the social implications of the majority-minority disagreement. In order to hold the correct opinion and to be accepted, the minority often exhibits manifest (public) change toward the majority's position. However, because the minority does not engage in active information processing about the issue in question, it is unlikely to experience latent (private) influence. In contrast, minorities induce a *validation* process, in which majority attention is focused on the issue underlying the disagreement. This focus causes the majority to engage in active information processing about the issue, which in turn often produces latent change toward the minority's position. Manifest change is unlikely to occur, however, because the majority does not want others to view it as deviant. According to this line of reasoning, majorities are more likely to produce "compliance" than "conversion," whereas minorities are more likely to produce conversion than compliance.

A number of experiments have assessed the impact of majority and minority influence on compliance and conversion. These studies have used a range of stimulus issues (e.g., perceptual, opinion) and a variety of dependent measures (e.g., public and private, immediate and delayed, direct and indirect). A recent review of this literature (Maass & Clark, 1984) suggests that majorities and minorities do indeed have different effects. Majorities are more likely than minorities to produce compliance, whereas minorities are more likely than majorities to produce conversion. Moreover, majorities rarely produce conversion in the presence of compliance, whereas minorities produce conversion even in the absence of compliance. Although there are exceptions to these generalizations (e.g., Doms & Van Avermaet, 1980; Mugny, 1984a;

Personnaz, 1981; Sorrentino, King, & Leo, 1980; Wolf, 1985), the bulk of available evidence suggests that majorities have their primary impact at the manifest, or public, level, and minorities have their primary impact at the latent, or private, level.

Since Moscovici first distinguished between compliance and conversion, several perspectives have been offered regarding the mediators of majority and minority influence. To the question, "Are majority and minority influence mediated by qualitatively different processes?", three answers have been proposed: no, yes, and sometimes.

One negative answer has been given by Latane and Wolf (1981; Wolf & Latane, 1983, 1985) and Tanford and Penrod (1984). These theorists argued that a single process is responsible for both majority and minority influence and that these two forms of influence differ in quantitative rather than qualitative terms. (Mullen's, 1983, formulation has not been applied to minority influence, but is also consistent with a single-process interpretation.) Given their ability to account for substantial variance in previous studies, the social impact and social influence models must be taken seriously. Nevertheless, because they fail to specify a *psychological* process underlying majority and minority influence, their adequacy as explanatory models is open to question. Moreover, these models do not deal explicitly with evidence, discussed above, that majorities typically produce public influence, whereas minorities typically produce private influence.

In contrast to the social impact and social influence models, other single-process explanations of majority and minority influence do posit underlying psychological mechanisms. Wolf (1979, in press) argued that minority influence, like majority influence, is mediated by dependence. According to this analysis, majorities, because of their numerical superiority, often elicit both normative and informational dependence (Insko, Smith, Aliche, Wade, & Taylor, 1985; Stasser et al., 1980). Minorities, in contrast, derive whatever strength they possess primarily from their ability to elicit informational dependence. Although these suggestions are plausible, it is questionable whether they really constitute a single-process explanation of majority and minority influence, because somewhat different mechanisms are assumed to operate in the two cases.

A related proposal has been made by Doms (1984; Doms & Van Avermaet, 1985). Like Wolf, Doms suggested that informational dependence may mediate both majority and minority influence. In addition, Doms asserted that social support (Allen, 1975) is a crucial

determinant of the impact of minorities as well as majorities. According to this analysis, just as majority influence is affected by whether minority members have support from others who hold their position, so minority influence is affected by whether majority members have similar support. Doms's research indicated that majorities and minorities operating under identical social support conditions produce similar levels of public influence. By failing to deal with private influence, however, Doms's analysis only partially addresses the question of whether majority and minority influence are mediated by a single process.

In addition to single-process models of majority and minority influence, dual-process models have also been proposed. For example, Nemeth (1985, 1986, in press) extended Moscovici's (1980) analysis by suggesting that disagreement from majorities and minorities has different effects on attention, thought, and problem solving. Nemeth asserted that majorities produce a narrow focus on the position that they advocate, whereas minorities produce a broader focus on new information and alternative positions. This difference presumably occurs because individuals exposed to majorities are more likely to feel stress, assume that the influence source is correct, and resolve the disagreement-induced conflict quickly. According to Nemeth, majority and minority disagreement have different consequences for problem solving. Minorities tend to produce divergent, creative solutions, while majorities tend to produce convergent, uncreative solutions (e.g., Nemeth & Kwan, 1985; Nemeth & Wachtler, 1983).

A related dual-process interpretation of majority and minority influence has been proposed by Maass, West, and Cialdini (this volume). These authors offered a thought-provoking analysis of the cognitive processes underlying conversion and the characteristics of minorities that trigger these processes. Maass et al. argued that, compared to majorities, minorities are more likely to focus attention on the stimulus under consideration (e.g., Personnaz & Guillon, 1985) and produce intense cognitive activity regarding this stimulus (e.g., Maass & Clark, 1983). In addition, they suggested that these effects are mediated by such minority characteristics as distinctiveness, credibility, capacity to produce arousal, and resistance to social pressure.

In contrast to the single-process and dual-process explanations, Chaiken and Stangor (1987) suggested that *multiple* cognitive processes (e.g., heuristic processing, attributional reasoning, message- and issue-relevant thinking) may underlie *both* majority and minority influence.

These authors asserted that the motives (e.g., reward, referent, informational) that operate in majority and minority settings constrain the cognitive processes that produce influence in these settings. Chaiken and Stangor hypothesized that when different motives operate in the two types of settings, qualitative differences in influence processes are likely. In contrast, when the same or similar motives are operative in both settings, quantitative differences are probable. Although Chaiken and Stangor did not attempt to present a complete account of the processes underlying majority and minority influence, they made a valuable contribution by emphasizing the importance of motivational as well as cognitive factors.

Group Context of Innovation

As the previous section indicates, a good deal of theoretical and empirical attention has been devoted to the cognitive mediators of minority influence in laboratory groups. In contrast, relatively little effort has been made to clarify how innovation operates in natural groups (Chaiken & Stangor, 1987; Maass & Clark, 1984). This state of affairs is somewhat surprising, since Moscovici frequently bolsters his arguments with historical references to consistent minority groups that triumphed over powerful majorities.

Although a systematic analysis of how the group context affects innovation is not yet available, several theorists have examined the impact of group factors on minority influence. As discussed previously, Mugny (Mugny 1982, 1984b; Papastamou, 1984; Papastamou & Mugny, 1985) has developed a psychosociological theory of minority influence dealing with the relationships between powers, populations, and minorities. Deconchy (1985) has analyzed the role of orthodox minorities within the Roman Catholic church, arguing that, although minority positions are "doctrinally unthinkable and functionally impossible" in orthodox systems, such systems often find minority positions useful and hence foster their existence. Gerard (1985), in analyzing why dissident minorities in real-world settings adopt consistent behavioral styles, has suggested the importance of such factors as external threat, minority distinctiveness, and social projection. Allen (1985) has argued that social interaction can be construed at different levels (infragroup, intragroup, intergroup) and that minority influence may be mediated by a different mechanism at each level.

A crucial characteristic of many natural groups is that, unlike laboratory groups, they exist for considerable periods of time (months, years, decades). The group's expectations and behavior regarding an individual, and the individual's expectations and behavior regarding the group, often vary as a function of how long the individual has been a group member. These temporal changes in the relationships between natural groups and their members can have important consequences for the amount and type of innovation that occurs.

To understand innovation, then, it is necessary to employ a conceptual model that reflects two critical aspects of group life: (a) that the group (or majority) and the individual (or minority) exert reciprocal influence on one another, and (b) that over time important changes occur in the relationship between the group and the individual. Moreland and Levine (1982) developed a model of group socialization that fulfills both of these criteria. It is meant to apply primarily (but not exclusively) to small, autonomous, voluntary groups whose members interact on a regular basis, have affective ties with one another, share a common frame of reference, and are behaviorally independent.

Socialization in Groups

The group socialization model incorporates three processes: evaluation, commitment, and role transition. It is assumed that a group and an individual continuously evaluate the rewardingness of their relationship. On the basis of these evaluations, feelings of commitment develop between the group and the individual. Levels of commitment change over time, rising or falling to previously established decision criteria. When a decision criterion is reached, a role transition takes place, and the individual enters a new phase of group membership. Evaluation proceeds, producing further changes in commitment and subsequent role transitions. In this way, the individual passes through five consecutive phases of group membership (investigation, socialization, maintenance, resocialization, remembrance), separated by four role transitions.

Initially, the group and the individual go through an *investigation* phase, during which the group looks for people who are likely to contribute to the attainment of group goals and the individual looks for groups that are likely to contribute to the satisfaction of personal needs. If the group's and the individual's commitment levels rise to their respective entrance criteria, then the individual enters the *socialization*

phase. In this phase, the group attempts to change the individual so that he or she can make greater contributions to group goal attainment, and the individual attempts to change the group so that it can better satisfy his or her personal needs. If the commitment levels of both parties rise to their respective acceptance criteria, then the individual enters the *maintenance* phase. Here, the group seeks to find a specialized role for the individual that maximizes his or her contributions to the attainment of group goals, and the individual attempts to define a specialized role that maximizes the satisfaction of personal needs. To the extent that the parties regard their relationship as rewarding, their commitment levels will remain high. However, if the group's and the individual's commitment levels fall to their respective divergence criteria, then the person enters the *resocialization* phase. In this phase, the group and the individual seek to make their relationship satisfactory once again. If the commitment levels of both parties rise to their respective divergence criteria, then a special role transition occurs and the individual reenters the maintenance phase. In contrast, if the group's and the individual's commitment levels fall to their exit criteria, then the individual leaves the group and enters the *remembrance* phase. Here, the group and the individual engage in retrospective evaluations of their past relationship and ongoing evaluations of one another.

Socialization and Innovation

Levine and Moreland (1985) recently used their group socialization model to analyze innovation. They defined innovation broadly to include any significant change (intentional or unintentional) that the individual produces in the structure, dynamics, or performance of the group. They suggested that each of the five membership phases in the group socialization model provides special opportunities for innovation.

During investigation, several factors can affect the ability of a prospective member to influence the group. The lower the number of prospective members relative to the number of "open" positions, the higher the commitment each of those persons will elicit from the group. The more commitment a prospective member elicits, the more that person will be able to change the group. The number of prospective members that a group attracts can also affect how current members are treated. For example, groups that have many prospective members may change their divergence and exit criteria to expel current members who are performing poorly. The characteristics of prospective members are

also likely to influence their ability to produce innovation. If a prospective member possesses abilities or traits that the group particularly admires, then the group's commitment to the person may be higher than his or her commitment to the group, and the person will be able to "demand" that the group change.

During socialization, newcomers can produce innovation both unintentionally and intentionally. The mere presence of newcomers alters the distribution of members' characteristics and thereby influences various aspects of group life. Newcomers also produce unintentional innovation by affecting the effort that other group members must devote to socialization activities. The greater this effort, the less members will be able to work on other group tasks. In regard to intentional innovation, newcomers are typically anxious about being accepted and hence reluctant to demand that the group accommodate to them. This diffidence may be overcome, however, if newcomers feel that they have been deceived about the rewards of group membership, particularly if they receive social support from other newcomers who also feel victimized.

During maintenance, full members elicit high commitment from others in the group and hence have substantial leverage in producing innovation. Moreover, full members are often given positions of leadership that provide special opportunities for changing the group. A leader who is especially powerful can sometimes force innovations on fellow members, but the typical leader requires the cooperation of others in order to produce change. To gain this cooperation, the leader must build coalitions by promising rewards and threatening punishments. The coalition-building process may itself alter the group by raising the commitment of those who join the coalition, lowering the commitment of those who do not, and reducing the group's productivity through the consumption of critical resources. Finally, in some cases, leaders may be required, rather than simply allowed, to alter the group's structure, dynamics, or performance. This is likely to occur if the group is having difficulty achieving its goals and views the leader as possessing special skills.

During resocialization, marginal members can produce unintentional changes in the group by causing others to engage in resocialization activities. If the group must devote time and energy to rehabilitating the marginal member, then it will have fewer resources to expend in trying to achieve its goals. The need to engage in resocialization activities may also elicit conflict among group members regarding how the marginal

member should be treated. In other cases, marginal members may desire to produce innovation. Such innovation is often difficult to produce because the group's commitment to marginal members is relatively low. Therefore, marginal members must use special strategies, such as reminding others of their previous contributions to the group and downplaying their current shortcomings. Under certain circumstances (e.g., when the group is short of members and the likelihood of obtaining new members is low), a marginal member's threat to leave the group may increase his or her ability to produce innovation.

During remembrance, innovation is sometimes related to the group's memories of how an ex-member behaved before leaving the group. If remembered positively, the ex-member may be used as a model in developing normative expectations for current members. In contrast, an ex-member who is remembered negatively may elicit just the opposite response. Innovation during remembrance is not always related to memories of how the ex-member behaved previously. That the person has merely left the group can produce changes in group performance, status relationships between members, and opportunities for upward mobility. Innovation can also be influenced by the conditions surrounding the ex-member's exit from the group and the degree to which the group and the individual have been successful since exit occurred. For example, groups are likely to accept innovation attempts from an ex-member if (a) the individual left the group at an appropriate time (e.g., graduation), (b) the individual has been successful since exit, and (c) the group has been unsuccessful since exit. In contrast, groups are unlikely to accept innovation attempts from an ex-member if (a) the individual left the group at an inappropriate time (e.g., expulsion), (b) the individual has been unsuccessful since exit, and (c) the group has been successful since exit.

Although many of these ideas regarding the relationship between innovation and group socialization are speculative, they nevertheless suggest the importance of investigating minority (and majority) influence in natural groups that have a past and a future. Such research should provide a useful counterweight to atemporal studies using laboratory groups.

CONCLUDING COMMENTS

Based on the sheer number of cited articles, it is clear that the topic of social influence in group contexts is attracting substantial theoretical

and empirical attention. Moreover, this work is paying dividends in terms of increased understanding of both majority and minority influence. In spite of Moscovici's urging, the dependence model does not seem likely to be discarded in the near future. Normative/informational influence remains a useful explanatory construct, and the dependence model, broadly defined, continues to generate interesting work. Nevertheless, it is also true that the conflict model is having a major impact on the way investigators conceptualize and study influence. Innovation is currently receiving as much attention as conformity, and vigorous debates are being waged concerning the mediators and consequences of these two forms of influence.

The major task for investigators in the years ahead is to clarify the processes that underlie majority and minority influence. One approach is to focus on the cognitive processes of individuals, using theories and methods borrowed from the attitude change and social cognition literatures. Several current explanations of majority/minority influence make assumptions about attention, information processing, and learning, but little direct evidence is available regarding how these processes operate in group influence situations. Research on such intrapersonal processes is likely to yield interesting information. We feel little need to encourage such work, however, given social psychology's current emphasis on cognitive explanations of individual behavior.

Instead, we argue for increased attention to interpersonal and intergroup factors. In order to understand majority and minority influence, it is essential to understand the social processes that occur within and between majorities and minorities. Although some suggestions have been made regarding these processes (e.g., Allen, 1985; Deconchy, 1985; Gerard, 1985; Levine & Moreland, 1985; Mugny, 1982), much remains to be learned.

In most studies of majority and minority influence, interaction between group members is severely restricted. The experimenter controls the responses of the source of influence (majority members in majority influence studies, minority members in minority influence studies), and the recipients of influence are not allowed to interact freely either with the source or with one another during the group session. Therefore, very little is known about the interactions that occur between majority members, between minority members, and between majority and minority members. In the following paragraphs, we offer hypotheses regarding these three types of interactions in natural groups.

A minority's presence may affect interactions between majority

members in several ways (Levine, 1980). For example, in seeking to achieve consensus regarding the reason that the minority espouses its position, majority members may engage in mutual social influence involving conformity, bargaining, coalition formation, and group polarization. Attainment of group consensus may be complicated by the fact that the minority's behavior often must be interpreted while the minority is physically present, thereby inhibiting open exchange among majority members. One outcome of the effort to attain consensus may be the discovery that certain majority members are themselves deviates by virtue of their nonmodal interpretation of the minority's behavior. In some cases, these newly discovered deviates may cause more concern to other group members than does the original minority. Once majority members decide why the minority espouses its position and what impact this position will have on group goal attainment, they must decide on appropriate treatment for the minority. This decision may be constrained by group norms concerning how deviates should be handled. If such norms do not exist or are difficult to apply in a particular case, majority members may attempt to achieve consensus regarding appropriate treatment for the minority. In the course of the ensuing discussion, conflict may arise regarding the most effective way to alter the minority's position (e.g., persuasive communications versus threats) and the selection of an "enforcer" to deal with the minority. Finally, if the behavior decided on by the majority does not have the intended effect, there may be recriminations toward those who suggested the behavior or carried it out.

The presence of a majority may also substantially affect interactions between minority members. In minorities that exist for relatively long periods of time, power struggles may arise between different factions that wish to lead the minority to its struggle against the majority. Whatever their origin, these struggles are often couched in ideological terms, with each faction claiming that its position is closer to the central core of minority beliefs. These struggles often become quite heated, escalating from claims that the other faction is in error to charges that the other faction is betraying the minority cause, to a disintegration of the original minority. In extreme cases, one of the factions may even ally with the majority against its former compatriots. Such minority conflict may increase cohesiveness among faction members and produce more commitment to their position (see Gerard, 1985). It may also stimulate efforts to gain converts to the faction in order to increase its strength and reassure members about the validity of their position. As

competition increases, the factions may adopt more hierarchical power structures and may prefer more authoritarian leaders. These changes may further exacerbate tensions between factions and decrease the probability of forming coalitions against the majority. Although not validated in laboratory settings, these ideas seem consistent with the behavior of many political and religious minorities.

Finally, some suggestions can be offered regarding interactions between majority members and minority members. The initial behavior of the minority toward the majority may set a tone that influences their interaction for some time. For example, a minority that publicly challenges a central tenet of the majority's position will probably elicit a more defensive and hostile reaction than a minority that privately challenges a peripheral aspect of the majority's position (Levine, 1980). This may occur because the former minority is seen as bent on destruction, whereas the latter minority is viewed as seeking reform. The majority's reaction to the minority's initial presentation may in turn affect the minority's subsequent decision to surrender, compromise, or fight to the finish. Of course, this decision may be affected by other factors, including the minority's commitment to its position, access to resources (e.g., printing presses, bombs), and perception of the majority's long-term strength. Whether majorities and minorities view themselves as members of the same or different groups may also have important implications for their interactions (Aebischer, Hewstone, & Henderson, 1984; Allen, 1985; Gerard, 1985; Maass et al., 1982). Organizations provide an interesting context in which to study how intragroup/intergroup perceptions affect interactions between majorities and minorities. When the organization as a whole feels threatened, majorities and minorities within the organization may view their disagreement in intragroup terms, which in turn may produce amicable relations and the tendency for compromise. In contrast, when the organization as a whole feels secure, majorities and minorities may view their disagreement in intergroup terms, which in turn may produce hostile relations and the tendency for polarization. These hypotheses are constrained, of course, by the hierarchical relationship between the majority and the minority. Interaction between a low-status minority and a high-status majority is likely to be quite different from that between a low-status majority and a high-status minority.

In conclusion, the future seems bright for research on majority and minority influence. Many interesting questions remain to be answered, theoretical controversy abounds, and investigators with divergent

interests (e.g., cognitive processes, intergroup relations) are attracted to the area. Given this fertile soil, many flowers are likely to bloom.

NOTES

1. It should be noted that sometimes the desire for belief validation is stronger than the desire for belief evaluation and sometimes dissimilar others are preferred to similar others for social comparison (Levine, 1980).
2. See Mullen (1985, 1986) and Jackson (1986) for a critical discussion of the role of strength and immediacy in social impact theory.

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Minority Influence and Conversion

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Group research has demonstrated a variety of influences of groups on individual behaviors, ranging from judgments of the length of lines

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